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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/764,640	01/18/2001	Glenn G. Amatucci	1380-US	8661

7590 01/12/2006

DOCKET ADMINISTRATOR  
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65 Livingston Avenue  
Roseland, NJ 07068

EXAMINER
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TUGBANG, ANTHONY D

ART UNIT	PAPER NUMBER
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3729

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/764,640	AMATUCCI, GLENN G.	
	<b>Examiner</b>	<b>Art Unit</b>	
	A. Dexter Tugbang	3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 9-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/23/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The applicant(s) amendment filed on September 23, 2005 has been fully considered and made of record.

### ***Claim Rejections - 35 USC § 103***

2. Claims 9-14 and 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai et al 5,711,988 in view of Azuma et al 4,626,964.

Tsai discloses a method of making a supercapacitor comprising: laminating an activated carbon coated material comprising an active surface area to an electrically conductive positive current collector foil to produce a porous positive electrode subassembly 111A (in Fig. 3) and laminating an activated carbon coated material comprising an active surface area to an electrically conductive negative current collector foil to produce a porous negative electrode subassembly 111B (see col. 7, lines 13-20 and col. 12, lines 43-46); disposing a porous separator membrane 125, 127 between the carbon coated surfaces of the electrode subassemblies; heating the assembly under pressure to form a porous laminated assembly (see col. 16, lines 37+); and contacting the porous laminated assembly with a non-aqueous electrolyte solution (see col. 17, lines 5-10). The electrode subassemblies 111A, 111B can either be said to positive or negative, because each is charged with positive and negative collector foils (see col. 10, lines 16-28).

Regarding Claim(s) 12 and 21, Tsai show calendar rolling in Figure 10, and it is to this extent that the assembly is considered to be "flexible".

Regarding Claim(s) 16 and 17, the porous metal grid of the collector foils can be made of either copper (see col. 5, line 55) or aluminum (see col. 3, lines 5-6).

Regarding Claim(s) 9, 12, 13, 16 and 17, Tsai teaches substantially all of the limitations of the claimed manufacturing method except that Tsai does not appear to mention that the carbon coated materials in both the positive and negative electrode subassemblies are each of a fabric, such that material can be said to be an “activated carbon fabric”.

Azuma teaches forming electrode subassemblies 23 that includes activated or active carbon fibers (see col. 3, lines 5+) to form an activated carbon fabric having the advantages of improved mechanical strength (see col. 3, lines 50-52).

Furthermore, Azuma also teaches that the electrode subassemblies are charged with positive and negative collector foils 3, 4.

Regarding Claim(s) 18 and 19, Azuma further teaches that the activated carbon fabric is a felt fabric (see col. 3, lines 11-13) and since Azuma does not mention anything about the materials being woven, the fabric is then considered to be a “non-woven fabric”.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the carbon coated surface materials of Tsai by including the activated carbon fabric in each of the electrode subassemblies, as taught by Azuma, to advantageously improve mechanical strength.

Regarding Claim(s) 10, 11, 14 and 20, the temperature, pressure ranges and material of the separator membrane, as well as the carbon fabric being one of a woven fabric, are all considered to be effective variables required for the manufacture of the supercapacitor and it would have been obvious to one having ordinary skill in the art at the time the invention was

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made to have utilized the specific recited temperature and pressure ranges, the material of the separator membrane, as well as the woven fabric material, since it has been held that discovering optimum values of result effective variables involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Furthermore, the specific recited temperature and pressure ranges, material of the separator membrane, and woven carbon fabric material, each do not provide any manipulative difference in the manufacturing method as compared to the prior art above.

#### ***Response to Arguments***

3. The applicant(s) arguments filed on September 23, 2005 have been fully considered, but are now considered to have been met in light of the teachings of Azuma, with the carbon fabric of Azuma being of an active, or activated, carbon fabric.

#### ***Allowable Subject Matter***

4. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

5. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on September 23, 2005, prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See

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MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 571-272-4570. The examiner can normally be reached on Monday - Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'A. Dexter Tugbang', written over the printed name.

**A. Dexter Tugbang**  
**Primary Examiner**  
**Art Unit 3729**

December 7, 2005